Tooling Manual (TMS-MC-015) Revision Log

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REV	DATE	CHANGES
34	07-20-2026	**Revised:** 1) Update ToC page references; 2) Update Tables 5.1, 5.2 Tool Codes.
33	02-17-2026	**Revised –** Part I, Sec. 2.15.2 **Added –** Part IV, Sec. 9.1, Bullet 11
32	10-02-2025	**Added –** Part II, Sec 5.1 "The Manufacturing Engineering group may also use the Secure Information Exchange (SIE) process to rapidly transfer data to/from Seller."
31	8-22-2024	**Revised –** Part I: 15.0 bullet 10 Do Not use Master Tools For Production Use; **Added – Part I:** 6.1.4, 11.8
30	08-17-2020	Administrative review for accuracy; **NO CHANGES**
	04-20-2016	**Revised -** Part I, Numerous grammatical corrections. Applicable Documents revised to add FAR- DFAR 252.211-7003 for IUID. Section 1.0 revised scope. 1.1, 1.2.1, 1.3, 1.4, 1.5 removed and added to section 7.0 as 7.2, 1.6, 2.1, 2.1.2, 2.1.3, 2.1.4, 2.5, 2.7, 2.8, 2.13.4 to direct suppliers to specific section that details applicable usage of the SATR document, 2.18, 5.2, 6.1, 7.3, 10.1, 11.1, 15.1. Part II, section 2.1, . Part IV, Section 3.0 to include expectations of supplier maintenance of air frame tools while in their possession, without the initiation of a SATR document. **Added-** Part I, section 3.7, 7.2, 7.3.4. Part II added note between Section 2.0 and 3.0. Added additional note to paragraph 3.8, 4.2.1 to address IUID/RFID requirements when imposed by PO.
29	08-01-2014	**Revised –** Part I, par. 6.1.2.1, 7.2, Section 10.0, par.10.1, 10.2, 10.4, 10.8, 11.1.8, 11.6, 13.2, Part II, par. 1.1, 2.1, 2.2, 2.4, 3.4, 3.10, 6.1. Part IV, Appendix A, par. 2.1, 2.3 **Added –** F-35 Part/Document: Number Policy (2YZA00996) to Applicable Documents. Part I, par. 2.18, 10.2.1, 10.2.2, 10.2.3, 10.3, 10.5, 10.6, 10.7, 10.9. Part II, par. 1.2, 1.3, 3.3.3, 3.11, 3.12. Part III, par. 2.5, 2.6, 2.7, Part IV, par. 2.3.1, Tooling Order of Precedence illustrations by program, Appendix B - Airframe Tool Codes and Definitions.
28	02-15-2013	**Revised -** Applicable Documents. Part I; par.1.1, 1.2.1, 1.3, 1.4, 2.1, 2.5, 2.7, 2.9, 2.11, 2.11.1, 2.14, 2.15.2, 2.15.3, 3.1, 3.5, 5.1, 6.2, 7.2, 7.2.1, 7.2.2, 7.7, 10.1, 10.3, 11.1, 11.1.4, 11.1.5, 11.5. Part II; par. 2.0, 2.1, 3.10. Part IV; par. 1.1, 1.2, 3.1, 4.1, 4.2, 5.0 **Added** – Figures 6, 7, 14, 15, 16 and rearranged several by moving them to Part IV. Painting and Coating Reference Table in Part II. Part I; par. 1.2.2, 1.6 thru 1.9, 2.4, 2.9.4 thru 2.9.6, 2.13.6, 2.14.4, 2.16, 6.0, 7.6, 15.0. Part II, par. 2.4. Part IV, Appendix: Table Of Contents, par. 2.0, 2.1, 2.2, 2.3, 2.4, 3.2, 3.3, 3.4, 3.5, 3.5.1, 3.5.2, 3.7, 3.7.1, 3.7.2, 4.2, 4.2.1, 4.2.2, 4.2.3, 4.3, 4.3.1, 4.3.2, 5.13, 6.0, 7.0 entire new section, 8.0 moved from Part I and revised, 9.0 moved from Part I

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27	2-27-2012	**Revised –Applicable Documents. Part I;** par. 1.1, 1.2, 1.3, 2.1, 2.4, 2.13.4, 2.15, 3.5, 5.0, 5.3, 6.1, 7.1, 7.2, 7.2.1, 7.3.2, 7.4, 8.1, 9.0, 10.3, 11.1, 11.3, 11.4, 11.5, 11.7. **Part II;** par. 2.2, 2.2.1, 3.8 bullets, 3.9, 3.10, 5.2, 6.0, **Part III;** par. 3.1, 3.2, **Part IV;** par. 1.3, 2.1 bullets, 3.2.7, 3.4 bullets, 3.5 bullets. **Added – Part I;** par. 1.5, 2.1.3, 2.10.1, 2.12.1, 2.12.2, 2.13.5, 2.13.5.1, 2.14.3, 2.15.3, 3.5 I/R bullet, 8.1.1, 11.2.1, 11.3.1, 11.3.2, 14.0, **Part II;** par. 2.2.3, 9.0, **Part IV;** par. 2.1 bullet, 3.1.1,
26	3-15-2010	**Revised – Part I,** par. 1.1, 2.12, 3.1, 5.1, 5.3, 6.1, 6.2, 7.3, 7.3.1, 7.3.2, 8.1, 9.0, 10.3, 10.4, 10.7, 11.1, 11.1.3, 11.2, 11.3, 11.4, 11.5, 12.1. **Part II,** par. 1.0, 2.1, 3.1, 3.4, 4.1, 6.0. **Part III,** par. 3.1, 3.2, 9.3. **Part IV,** par. 3.4. 3.5. Revised by deletion Part I, par. 2.14. **Added- Part I,** par. 1.4, 2.1.1, 2.1.2, 2.13.4, 2.15, 3.5, 3.6, 3.7, 3.8, 3.9, 7.1.2, 7.1.3, 7.1.4, Note to 10.1, Bullets to 11.1, 11.1.4 through 11.1.9, Bullet to 11.5, Section 13.0, **Part II,** par. 1.1, 2.2, 2.3, 3.8, 3.9, 3.10, 4.4, 6.5, 7.2, Section 8.0. **Part IV,** par. 1.3. **All Figures revised, re numbered and additions,** DS-1017 I/R label, I/R wear groove example, I/R hole options, I/R hole examples, I/R tool design requirements.
25	2-4-2009	**Revised – Part I,** par. 2.14.3, 5.0 Title revised, 9.0 by adding clarification, 10.1 by deleting redundant language, 12.0 by clarifying record retention requirements. **Part III,** par. 1.1. **Added – Part I,** par. 2.15 Applicable Documents, 16PP1957 and 5PD41327. **Part II,** par. 7.0 by adding duplicate tool manufacturing requirements.
24	6-12-2008	**Revised** – **Part I**, par. 7.1, 7.2, 7.3.1, 10.2, 10.3, 11.1 11.2, 11.3, 11.6 and 11.7. **Part II**, par. 1.0 3.4, 4.0. **Part III** par. 1.1 and 3.2. **Part IV**, par. 1.1 and 1.2. **Added – Part** I, par. 2.14.1, 2.14.2, 2.14.3, 2.14.4, defining the SATEIAR Checklist applicable to suppliers delegated EIA, par. 7.1.1 to establish clearer instructions for Seller requirement to provide a calibration and testing procedure for SE, MTE and STE. Par.11.1.3 Instruction to use coordination tolerances in Part IV. **Part II**, par. 4.3 and 4.3.1.
23	1-8-2008	**Revised – Applicable Documents,** Application and usage. **Part I,** numerous revisions and deletions, due to adding Part IV to manual. Most all deletions are combined in Part IV**. Section 7.3,** added par., 7.3.1, **7.5,** clarifying “Also Use” requirements. **Section 9.0,** some preservation requirements removed and added to Part IV. **Part II,** par., 3.5 revised to address recordable information in the PIL. **Part III** revisions are grammatical revisions. Some preservation requirements are removed and added to Part IV. **Added Part IV – Appendix “A”** Establishes coordination requirements for tools by family and usage as well as defines preservation requirements.
22	7-30-2007	**Revised – Applicable Documents** Revised application and usage, **Part I, section 2.12**, clarifying E-SPAR usage. Several grammatical corrections including the change usage of PQAR to PQAFE. **11.0** Defined PI/V process. **11.1**, provided illustration as to what type tools shall be placed into PI/V. **12.0** Clarified necessary record retention information. **Added Part I, section 2.13.3** clarifying SATR usage. **7.7** NRE Tool identification requirements.

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21	10-25-2006	**Revised - Part I sections 1.0**, revised by adding requirement definition to include Support Equipment, Manufacturing Support Equipment, Special Test Equipment and Manufacturing Test Equipment. **2.0**, revised to include definitions of added tooling in section 1.0 and better clarification to existing language. **3.0**, revised language for clarity and added basic tooling hole tolerances. **5.0**, revised record requirements. **6.0**, revised text and grammar. **7.0**, revised text and grammar and added specific requirements for U.S. Government owned tooling. **8.0**, revised text and grammar. **9.0** grammatical changes.**10.0** several grammatical changes and added paragraph 10.8. **11.0**, completely rewritten to provide greater clarity of LM Aero requirements for Periodic Inspection of tooling. **12.0** added to additional record requirements. **Part II sections 1.0 through 6.0**, revisions are mostly grammatical changes for clarity. **Added Part III –** Addressing International Sellers. Formally known as International Co-producers and Sub-contractors. **Deleted Appendix A –** All references contained in this Appendix are defined in detail within PM-4053
20	7-25-2005	**Revised (1)** All specific call outs of TMS-MC-002 or other TMS, TDS or MSM documents were deleted and replaced with reference to PM-4053 manual which supersedes these documents as of July 1, 2005. **(2)** Revised all associating language and or text from superseded documents and corrected grammatical errors.
19	5-9-2005	**Added: (1)** Paragraphs 2.2 and 2.3 to part one defining usage requirements of SPaR and SATR. **(2)** Paragraph 6.0 to part two addressing Torque Seal requirements. **Revised: (1)** Periodic Review cycle changed from 360 days to annual from the last date PI was performed to reinforce requirements.
18	1-27-2005	Complete re-write of manual to conform to current business practice and to establish requirements for all LM Aero Fort Worth, Marietta and Palmdale.